

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL01 / H-Tank Farm**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0036**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

THE SCOPE OF WORK DESCRIBED IN THIS PROJECT IS WRITTEN FOR FUNDING AT THE PLANNING LEVEL. H Tank Farm safely stores approximately 17 million gallons and 280 million curies of liquid high-level radioactive waste in 23 underground waste storage tanks. Tank farm activities include 24-hr tank surveillance, maintenance, monitoring, inspection, and sampling of 23 underground storage tanks ranging in volume between 750,000 and 1,300,000 gallons each; 24-hr manning of control rooms; operation of the 2H and RHLWE evaporator systems; continual waste transfers (between tanks, from H-Canyon and DWPF, to/from F-Tank Farm, and to/from Waste Pretreatment; area radiation monitoring; and operation of the 299-H shielded cell maintenance facility. Tank farm work is done remotely or with shielding due to the intense radiation fields. TECHNICAL APPROACH: The key technologies used in the safe storage and management of this liquid high level radioactive waste include the following: evaporation (to reduce the volume of waste to be stored); chemical additions (to adjust waste pH to minimize corrosion of carbon steel tank walls); ventilation (to remove hydrogen gas from tank vapor space); cooling (to remove heat caused by radioactive decay); shielded transfer systems (piping, gang valves, jumpers, pumps and jets); monitoring systems (radiation, liquid levels, leak detection, combustible gas, etc.); and remote inspection for tanks walls and annuli.

Project Status in FY 2006:

By FY06 waste will have been removed from 3 of the 23 underground, waste storage tanks and one of these empty tanks will have been operationally closed. NOTE: Operational tank closure is covered by Waste Removal Operations and Tank Closure(SR-HL03) and disposition is covered by HLW Facility Disposition (SR-FA24).

Post-2006 Project Scope:

Waste will be removed from the remaining 20 underground waste storage tanks and they, plus all other tanks previously emptied, will be operationally closed by the end of FY27. NOTE: Operational tank closure is covered by Waste Removal Operations and Tank Closure (SR-HL03) and disposition is covered by HLW Facility Disposition (SR-FA24).

Project End State

The project will end in FY27 when all waste removal activities are complete and all remaining tanks and facilities have been removed from service. This includes de-inventorying the existing underground, high-level radioactive waste storage tanks and associated facilities. NOTE: Operational tank closure is covered by Waste Removal Operations and Tank Closure(SR-HL03) and disposition is covered by HLW Facility Disposition (SR-FA24).

Cost Baseline Comments:

Outyear estimates use FY01 as the base year, adding escalation and adjusting for the following major programmatic changes. DCS UPGRADE to process computers (FY02 - FY04). Tanks and the supporting infrastructure for tank groups are removed from service and surveillance and maintenance reduced accordingly per the following schedule: Tank 16 (FY03); Tank 1 (FY04); Tank 15 (FY07); Tanks 12, 21 and 22 (FY10); Tanks 13, 14, 23 and 24 and infrastructure for tanks 13-16 and 21-24 (FY12); Tank 10 (FY17); Tank 9 and infrastructure for tanks 9-12(FY18); Tanks 35 and 39 (FY19); Tank 31 (FY20); Tank 36 (FY24); Tanks 30 and 37 and infrastructure for tanks 35-37 (FY25); Tank 38 &43 (FY26); Tanks 29, 32

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and 41 and infrastructure for tanks 29-32, 38, 39, 41, and 43 (FY27); also, in FY27 all remaining tanks and infrastructure are removed from service and H Tank Farm operations are ended.

Safety & Health Hazards:

The main hazard in this facility is from the highly radioactive liquid waste (17 million gallons, 280 million Ci) stored in 23 underground storage tanks. The main radioactive constituents of this waste are Strontium-90, Cesium-137, Plutonium-238, Plutonium-239, and Plutonium-241. The tanks were built underground to provide shielding from the intense radiation fields of this highly toxic waste. Operations, maintenance and waste handling are done under radiological conditions to avoid direct personnel exposure and prevent contamination. Other hazards include exposure to process chemicals (such as nitric acid and sodium hydroxide) as well as miscellaneous hazards commonly encountered in industrial settings (lifting, tripping, falls, rotating equipment, etc.). These hazards are controlled both through engineering controls (hand rails, motor guards, etc.) and through administrative controls (policies and procedures, training, personal protective equipment, etc.).

Safety & Health Work Performance:

All work is performed using a WSRC Integrated Safety Management System (ISMS) approach. The ISMS integrates safety considerations into management and work practices at all levels to accomplish missions while protecting the public, the worker, and the environment. The key elements of the WSRC ISMS are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the ISMS. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles, and ensures a consistent, disciplined site-wide approach to safety while performing work.

PBS Comments:

Funding for H Tank Farm is at the level necessary to ensure safe storage and management of the liquid high level radioactive waste and to meet an overall system production of 200 canisters per year from FY98-04, 225 canisters in FY05, 250 canisters per year in FY06-14, and 200 canisters per year in FY15-24. FY99 funding reductions for a related project (SR-HL04 - ITP/ESP/LW Operations) has already resulted in a four year extension of this project.

The tank farm operates under a SCDHEC waste water permit.

The major drivers for this project are:

- Stakeholders - The continued storage of liquid, high-level radioactive waste in underground tanks is the major concern of the SRS stakeholders. One of our major stakeholders, the SRS Citizen's Advisory Board, considers the continued storage of this liquid high level radioactive waste in underground tanks at SRS one of the greatest risks to the public, workers, and the environment. This group further stated that the processing of this waste into glass should be given high priority by DOE.
- Federal Facilities Agreement (FFA) - Executed by the Department of Energy, the Environmental Protection Agency and the South Carolina Department of Health and Environmental Control on January 15, 1993. The initial schedule proposed that liquid high level radioactive waste be removed from all 12 of the old style tanks in H-Tank Farm which do not meet specified secondary containment and leak detection requirements by

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2028. This proposed date, however, has been rejected by the state as not aggressive enough. Negotiations are underway to establish a more aggressive commitment date that will meet regulatory expectations while balancing technical and resource limitations.

- Site Treatment Plan - The Site Treatment Plan for SRS includes the following commitments for DWPF (Vitrification, SR-HL05): "After the startup period is complete and DWPF begins full operation, the maintenance of an average of 200 canisters of processed glass per year will be required in order to meet the schedule for removal of backlogged and currently generated waste inventory by the year 2028." This requires H-Tank Farm operation to be funded at the level necessary to maintain safe storage of waste as well as operation of waste transfer and waste evaporation systems to support this production rate in DWPF (i.e., H-Tank Farm must receive, evaporate, and store recycle waste from DWPF as well as provide feed stock for DWPF)

- DNFSB Recommendation 94-1 - Nuclear materials to be used in nuclear weapons that were in the manufacturing pipeline when production was halted requires treatment on an accelerated basis to convert them to forms more suitable for safe interim storage. In order to process some of this material, the F & H Canyons must operate and the resulting waste must be received, volume reduced, and safely stored.

Baseline Validation Narrative:

This project has completed an internal validation conducted by SRS personnel independent from the project.

General PBS Information

Project Validated?	Yes	Date Validated:	1/29/1999
Has Headquarters reviewed and approved project?	No		
Date Project was Added:	12/1/1997		
Baseline Submission Date:	7/3/1999		
FEDPLAN Project?	Yes		

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	N	Y	N	N	Y	N	N

Project Identification Information

DOE Project Manager:	H. B. Gnann
DOE Project Manager Phone Number:	803-208-6076
DOE Project Manager Fax Number:	803-208-7414
DOE Project Manager e-mail address:	howard.gnann@srs.gov
Is this a High Visibility Project (Y/N):	

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Planning Section

Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	981,609	1,812,633	2,794,242	100,104	100,104	84,839	84,839	93,474	92,617	97,759	99,353	101,498	102,466	103,354	106,145	
PBS Baseline (constant 1999 dollars)	899,952	1,148,781	2,048,733	100,104	100,104	84,839	84,839	93,474	89,399	91,083	90,134	89,660	88,135	86,562	86,562	
PBS EM Baseline (current year dollars)	981,609	1,812,633	2,794,242	100,104	100,104	84,839	84,839	93,474	92,617	97,759	99,353	101,498	102,466	103,354	106,145	
PBS EM Baseline (constant 1999 dollars)	899,952	1,148,781	2,048,733	100,104	100,104	84,839	84,839	93,474	89,399	91,083	90,134	89,660	88,135	86,562	86,562	
	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS Baseline (current year dollars)	107,752	110,661	113,649	112,627	466,640	421,866	397,170	82,268	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	85,562	85,562	85,562	82,564	316,027	250,072	206,071	37,361	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	107,752	110,661	113,649	112,627	466,640	421,866	397,170	82,268	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	85,562	85,562	85,562	82,564	316,027	250,072	206,071	37,361	0	0	0	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2024

Current Projected End Date of Project: 9/30/2027

Explanation of Project Completion Date Difference (if applicable):

Due to constrained Budgets in the FY01-06 period, the HLW program will not complete operations in early FY24 as shown in the last baseline. Operations will continue until end of FY25. This will result in the H Tank Farm facility operations extending from the end of FY24 until the end of FY27.

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	1,934,361	Actual 1997 Cost:	100,104	Actual 1998 Cost:	84,839
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	1,749,418	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			47,234
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	1,796,652				

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):	12,302	PACE savings including maintenance, training and engineering efficiencies.
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):	79,441	Funding limits in FY00-06 results in 3 years of additional storage costs.
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	1,863,791	
Additional Amount to Reconcile (+):	-1	

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Project Reconciliation

Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars): **1,863,790**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
DEVELOP/ISSUE TANK FARM TSR/SAR IMPLEMENTATION PLAN	SR-HL01-990		12/4/1998			12/3/1998					
IMPLEMENT H TANK FARM INTERIM AUTHORIZATION BASIS	SR-HL01-993		6/1/1999								
ISSUE ANNUAL TANK INSPECTION REPORT TO SCDHEC	SR-HL01-994		7/31/1999	7/1/1999			Y				
PLACE RHLWE FACILITY IN ROUTINE OPERATIONS	SR-HL01-995		9/30/1999								
PROVIDE 3.2 MILLION GALLONS OF WASTE EVAPORATOR IN H/F TANK FARMS	SR-HL01-996		9/30/1999								
NOT A MILESTONE			9/30/1998								
REBASELINE ALL SC/SS CONDUCTIVITY PROBES FOR H/F TANK FARMS	SR-HL01-991		1/31/1999								
SUBMIT ANNUAL SCDHEC REPORT ON STATUS OF TANKS BEING REMOVED FROM	SR-HL01-992		3/31/1999	3/9/1999			Y				
Remove Tank 16 from HLW Service	SR-HL01-020		9/30/2002						Y		
Remove Tank 11 from HLW Service	SR-HL01-030		9/30/2003								
Remove Tank 15 from HLW Service	SR-HL01-050		9/30/2006								
Remove Tanks 12, 21, & 22 from HLW Service	SR-HL01-090		9/30/2009								
Remove Tks 13, 14, 23 & 24 from HLW Service & Remove Tks 13-16 & 21-24 Support Systems from Service	SR-HL01-110		9/30/2011								
Remove Tank 9 from HLW Service and Remove Tanks 9-12 Support Systems from Service	SR-HL01-170		9/30/2017								

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Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Remove Tanks 35 & 39 from HLW Service	SR-HL01-180		9/30/2018								
Remove Tank 31 from HLW Service	SR-HL01-190		9/30/2019								
Remove Tank 10 from HLW Service	SR-HL01-160		9/30/2016								
NOT A MILESTONE			9/30/1998								
Remove Tank 36 from HLW Service	SR-HL01-230		9/30/2023								
Remove Tanks 30, 38, 37, & 43 from HLW Service and Remove Tanks 35-37 Support Systems from Service	SR-HL01-240		9/30/2024								
Remove Tks 29, 32, & 41 from HLW Service & Tks 29-32, 38, 39, 41, & 43 Support Systems from Serv.	SR-HL01-260		9/30/2026								
Project Mission Complete	SR-HL01-270		9/30/2027	9/30/2028					Y		
Project Start	SR-HL01-001		10/1/1996								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
DEVELOP/ISSUE TANK FARM TSR/SAR IMPLEMENTATION PLAN	SR-HL01-990										
IMPLEMENT H TANK FARM INTERIM AUTHORIZATION BASIS	SR-HL01-993										
ISSUE ANNUAL TANK INSPECTION REPORT TO SCDHEC	SR-HL01-994										
PLACE RHLWE FACILITY IN ROUTINE OPERATIONS	SR-HL01-995										
PROVIDE 3.2 MILLION	SR-HL01-996										

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Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
GALLONS OF WASTE EVAPORATOR IN H/F TANK FARMS											
NOT A MILESTONE										Y	
REBASELINE ALL SC/SS CONDUCTIVITY PROBES FOR H/F TANK FARMS	SR-HL01-991										
SUBMIT ANNUAL SCDHEC REPORT ON STATUS OF TANKS BEING REMOVED FROM	SR-HL01-992										
Remove Tank 16 from HLW Service	SR-HL01-020										
Remove Tank 11 from HLW Service	SR-HL01-030										
Remove Tank 15 from HLW Service	SR-HL01-050										
Remove Tanks 12, 21, & 22 from HLW Service	SR-HL01-090										
Remove Tks 13, 14, 23 & 24 from HLW Service & Remove Tks 13-16 & 21-24 Support Systems from Service	SR-HL01-110										
Remove Tank 9 from HLW Service and Remove Tanks 9-12 Support Systems from Service	SR-HL01-170										
Remove Tanks 35 & 39 from HLW Service	SR-HL01-180										
Remove Tank 31 from HLW	SR-HL01-190										

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Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Service											
Remove Tank 10 from HLW Service	SR-HL01-160										
NOT A MILESTONE										Y	
Remove Tank 36 from HLW Service	SR-HL01-230										
Remove Tanks 30, 38, 37, & 43 from HLW Service and Remove Tanks 35-37 Support Systems from Service	SR-HL01-240										
Remove Tks 29, 32, & 41 from HLW Service & Tks 29-32, 38, 39, 41, & 43 Support Systems from Serv.	SR-HL01-260										
Project Mission Complete	SR-HL01-270				Y						
Project Start	SR-HL01-001			Y							

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planned 2004
HLW														
Storage	M3							67,109.00	69,096.00	67,285.00	66,675.00	68,372.00	68,629.00	69,064.00
Tech.														
Deployed	Ntd	3.00	0.00	3.00						1.00	2.00			
Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035	Planned 2036 - 2040

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Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
HLW													
Storage Tech.	M3	69,064.00	70,132.00	71,564.00	71,752.00	73,721.00	73,965.00	71,384.00	49,212.00	31,802.00	7,594.00	0.00	
Deployed	Ntd												
Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total			
HLW													
Storage Tech.	M3												
Deployed	Ntd									3.00			

Technology Needs

Site Need Code: SR99-2027

Site Need Name: Demonstrate Alternative Filtration Technologies to Replace HEPA Filters

Focus Area Work Package ID: WT-04-01

Focus Area Work Package: Ancillary Tank Equipment Enhancements

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

Metal Filters for Waste Tank Ventilation

Metal Filters for Waste Tank Ventilation

Cost Savings (in thousands of dollars)

5,000

Range of Estimate

Low

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Technology Needs

<u>Related CCP Milestones</u>	<u>Related Waste Streams</u>	<u>Agree?</u>	<u>Change?</u>
	00503: -	Y	N
	00496: -	Y	N
	00499: -	Y	N
	00502: -	Y	N

Site Need Code: SR99-2028

Site Need Name: Alternative Waste Removal Technology

Focus Area Work Package ID: TFA-1

Focus Area Work Package: Required Steps to Tank Closure at Hanford, ORR, Idaho, and SRS

Focus Area: TFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

<u>Technologies</u>	<u>Cost Savings (in thousands of dollars)</u>	<u>Range of Estimate</u>
Flygt Mixer		

<u>Related CCP Milestones</u>	<u>Related Waste Streams</u>	<u>Agree?</u>	<u>Change?</u>
	00496: -	Y	N
	00499: -	Y	N

Site Need Code: SR99-2033

Site Need Name: Provide Alternative Processing and/or Concentration Methods For DWPF Recycle Aqueous Streams

Focus Area Work Package ID: TFA-3

Focus Area Work Package: Alternative Paths to In-Tank Precipitation at SRS

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Risk Reduction

<u>Technologies</u>	<u>Cost Savings (in thousands of dollars)</u>	<u>Range of Estimate</u>
Cesium Removal Using Crystalline Silicotitanate		
Advanced Separations at Savannah River Site		

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Technology Needs

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00499: -

Y

N

00496: -

Y

N

Site Need Code: SR99-2035

Site Need Name: Develop Advanced Techniques for Life Extension of High Level Waste Tanks and Piping

Focus Area Work Package ID:

Focus Area Work Package:

Focus Area:

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Site Need Code: SR99-2037

Site Need Name: Tank Heel Removal/Closure Technology

Focus Area Work Package ID: TFA-1

Focus Area Work Package: Required Steps to Tank Closure at Hanford, ORR, Idaho, and SRS

Focus Area: TFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

In Situ Viscosity and Density Monitoring Using Quartz Resonators

Bamberger Ultrasonic Sensor

Automated Monitoring System for Fluid Level and Density in High-Level Waste Tanks

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Technology Needs

AEA Fluidic Pulse Jet Mixer
Heel Retrieval for SRS
Tank Riser Pit Decontamination System
Flygt Mixer
Sludge Wash Monitor

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00496: -

Y

N

00499: -

Y

N

Site Need Code: SR99-2039

Site Need Name: Methods to Unplug Waste Transfer Lines

Focus Area Work Package ID: TFA-1

Focus Area Work Package: Required Steps to Tank Closure at Hanford, ORR, Idaho, and SRS

Focus Area: TFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

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Technology Needs

Site Need Code: SR99-2041

Site Need Name: Demonstration of Alternative Mixer Technology for HLW Pump Tanks

Focus Area Work Package ID: WT-02-01

Focus Area Work Package: Waste Mobilization and Retrieval

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Both

Technologies

AEA Fluidic Pulse Jet Mixer

Cost Savings (in thousands of dollars)

10,000

Range of Estimate

Low

AEA Fluidic Pulse Jet Mixer

10,000

Low

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00503: -

Y

N

00496: -

Y

N

00499: -

Y

N

00502: -

Y

N

Site Need Code: SR99-2044

Site Need Name: Demonstrate In-Situ Characterization Weight Percent Probe

Focus Area Work Package ID: TFA-1

Focus Area Work Package: Required Steps to Tank Closure at Hanford, ORR, Idaho, and SRS

Focus Area: TFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies

Automated Monitoring System for Fluid Level and Density in High-Level Waste Tanks

Cost Savings (in thousands of dollars)

Range of Estimate

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL01 / H-Tank Farm**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0036**

Technology Needs

<u>Related CCP Milestones</u>	<u>Related Waste Streams</u>	<u>Agree?</u>	<u>Change?</u>
	00503: -	Y	N
	00496: -	Y	N
	00499: -	Y	N
	00502: -	Y	N

Site Need Code: SR99-2045

Site Need Name: In-Situ Waste Tank Corrosion Probe

Focus Area Work Package ID: WT-04-01

Focus Area Work Package: Ancillary Tank Equipment Enhancements

Focus Area: TFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

<u>Technologies</u>	<u>Cost Savings (in thousands of dollars)</u>	<u>Range of Estimate</u>
Corrosion Probe	100,000	Low
Corrosion Probe		
Integrated Raman pOH Sensor for In-Tank Corrosion Monitoring		

<u>Related CCP Milestones</u>	<u>Related Waste Streams</u>	<u>Agree?</u>	<u>Change?</u>
	00512: -	Y	N
	00496: -	Y	N
	00499: -	Y	N

Dataset Name: **FY 1999 Planning Data**

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Date of Dataset: **9/20/1999**

Project Baseline Summary Report

Data Source: **EM CDB**
Operations/Field Office: **Savannah River**
Site Summary Level: **Savannah River Site**
Project **SR-HL01 / H-Tank Farm**

Report Number: **GEN-01b**
Print Date: **3/9/2000**
HQ ID: **0036**

Technology Needs

Site Need Code: SR99-2050-S
Site Need Name: Fracture Toughness Properties for Carbon Steel Utilized for Nuclear Waste Containment Vessels
Focus Area Work Package ID: **Focus Area Work Package:**
Focus Area: **Agree with Technology Link:** Y
Benefits (Cost, Risk Reduction, Both): Risk Reduction

Technologies

Cost Savings (in thousands of dollars)

Range of Estimate

Related CCP Milestones

Related Waste Streams

Agree?

Change?

00512: -	Y	N
00496: -	Y	N
00499: -	Y	N

Technology Deployments

Deployment Year			
Deployment Status	Planned	Forecast	Actual Date
Technology Name: AEA Fluidic Pulse Jet Mixer			
Potential Deployment	2000		
Technology Name: Corrosion Probe			
Potential Deployment	2001		
Technology Name: Metal Filters for Waste Tank Ventilation			
Potential Deployment	2001		

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**